

NOCTURNAL AFROTROPICAL MIGRANTS AT
MUFINDI, SOUTHERN TANZANIA

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The first reliable instance of a migrant bird appearing at lights in the Mufindi area of southern Tanzania occurred in May 1962 when a local resident reported seeing a 'most beautiful' bird lying stunned below a lighted window in the early morning. The species was the African Pitta *Pitta angolensis* and it had been grounded whilst migrating at night in the thick mist that prevails over the area during the rainy months of March, April and May. Mufindi is situated in the south-western part of the Uzungwa Mountains in southern Tanzania and much of the area lies above 1800 m. The escarpment edge of the mountains runs approximately east to west presenting a climatic and geographical barrier of over 600 m to migratory birds travelling north to non-breeding grounds nearer the equator. While the escarpment edge itself supports some large tracts of natural rain forest, much of it protected Forest Reserve, the land behind the scarp is all under cultivation, mainly tea and eucalyptus plantations, and only remnants of the original forest still exist in small pockets among the tea.

Three tea factories serve the area and one of these, Kilima (8:36S, 35:22E) is situated at 2000 m on a prominent ridge approximately 4 km from the escarpment edge, providing the first point of reference for the birds as they gain altitude to negotiate the scarp. Misty conditions are encountered with the rise in altitude and the birds are attracted to the only brightly lit area in the vicinity. It has been well known locally for many years that small numbers of birds are grounded within the factory compound when mist occurs but neither numbers nor species have been recorded. Until this study began factory watchmen collected the birds for eating and we have been compelled to offer recompense for the loss of protein to encourage watchmen to hand birds in.

In 1982 a ringing station was set up in the Mufindi area and a study of the migrant birds entering the factory begun. East African Natural History Society Rings are used and financial assistance was offered from the Ornithological Sub-Committee and the Society's Migration Fund. The grant was used to increase the intensity of light at the factory and at a garden site a kilometre south of the factory with a view to attracting greater numbers of birds. The factory site is extremely exposed and conditions during the hours of darkness when mist and rain are heavy can cause numerous bird casualties. Temperatures reach as low as 3 deg C and strong winds augment the chill factor. Birds perish very quickly in these conditions if they do not find cover and as a result, once grounded, quickly make for the many drains that surround the buildings. Catching the birds can be difficult in these circumstances and most are picked up by hand from the drains and

torches are used to locate them. Attempts have been made to trap birds using mist-net but these have proved difficult to use in high winds and have to be checked very regularly to ensure that trapped birds do not die as a result of exposure. The vegetation surrounding the factory site is not suitable for a mist-netting programme and birds have usually resumed their migration at first light.

RESULTS

The results for 1982 are presented in Table 1. During March, April and May of 1982 the project was still in its infancy and at this stage all birds were being caught irregularly by factory staff. Ringing did not begin in the area until October, although data, including plumage details, were recorded for these unringed birds. Mist during November is unpredictable but perfect conditions occurred in the middle of the month to yield eight African Pittas over a four-day period. These and all subsequent birds caught were ringed. Bird arrivals at the factory coincide with the moon's dark phases and most occur during the week each side of the new moon, providing weather conditions are also favourable. Mist can appear at any time during the night and varies considerably in duration and density making it difficult to predict when birds might occur.

For the 1983 season (see Table 2), additional lighting and manning of the site resulted in a greater number of captures although weather conditions were not always favourable during migration times.

It was not until the 1984 season that both authors were able to fully co-ordinate their own efforts and those of the factory staff and were assisted most ably during late April and early May by Prof. K.M. Howell and C.A. Msuya to provide some encouraging results (see Table 3). Not only were more birds caught, but a greater number of species was also recorded in the factory catches, including Allen's Gallinule *Porphyrio alleni*, Striped Crake *Porzana marginalis* and Lesser Cuckoo *Cuculus poliocephalus*, all species new to the Mufindi checklist (Boswell and Beakbane in prep.).

Table 1. Numbers of Afrotropical migrants caught at Mufindi in 1982

Species	No.
Harlequin Quail <i>Coturnix delegourguei</i>	3
African Crake <i>Crex egregia</i>	2
Streaky-breasted Pygmy Crake <i>Sarothrura boehmi</i>	3
African Pitta <i>Pitta angolensis</i>	10

Table 2. Number of Afrotropical migrants caught at Mufindi in 1983

Species	No.
Harlequin Quail <i>Coturnix delegourguei</i>	9
African Crake <i>Crex egregia</i>	2
Lesser Moorhen <i>Gallinula angulata</i>	1
Streaky-breasted Pygmy Crake <i>Sarothrura boehmi</i>	1
Temminck's Courser <i>Cursorius temminckii</i>	1
Didric Cuckoo <i>Chrysococcyx caprius</i>	1
African Pitta <i>Pitta angolensis</i>	5
Paradise Flycatcher <i>Terpsiphone viridis</i>	1

Table 3. Number of Afrotropical migrants caught at Mufindi in 1984

Species	No.
Little Bittern <i>Ixobrychus minutus payesii</i>	1
Harlequin Quail <i>Coturnix delegourguei</i>	37
African Crake <i>Crex egregia</i>	12
Lesser Moorhen <i>Gallinula angulata</i>	3
Allen's Gallinule <i>Porphyrion alleni</i>	11
Striped Crake <i>Porzana marginalis</i>	4
Streaky-breasted Pygmy Crake <i>Sarothrura boehmi</i>	5
Didric Cuckoo <i>Chrysococcyx caprius</i>	1
Lesser Cuckoo <i>Cuculus poliocephalus rochii</i>	2
Pygmy Kingfisher <i>Ispidina picta natalensis</i>	3
African Pitta <i>Pitta angolensis</i>	40
Robin Chat <i>Cossypha caffra</i>	1
Orange Ground Thrush <i>Turdus gurneyi</i>	2

CONCLUSIONS

Of the fifteen species recorded from the factory, seven are included in the East African Rare Bird List (East African Natural History Society 1982, East African Rare Bird List, *Scopus* (6) Supplement). With the exception of the Robin Chat *Cossypha caffra* and probably the Orange Ground Thrush *Turdus gurneyi* (both of which are likely to have been local birds), all the species caught are Afrotropical migrants. Most are generally uncommon, like the Lesser Cuckoo *Cuculus poliocephalus rochii* and the Striped Crake, *Porzana marginalis*. Little is known of the movements of these species and recent documentation in Tanzania is sparse. We have no daytime observations for any of these migrants and conclude that migration resumes at first light. Palaearctic migrants, however, are observed in good numbers around the factory and generally throughout the area after weather conditions have been suitable for a 'fall'. Palaearctic species include Lesser Grey Shrike *Lanius minor*, Red-backed Shrike *L. collurio*, Rock Thrush *Monticola saxatilis*, Yellow Wagtail *Motacilla flava*, Willow Warbler *Phylloscopus trochilus*, Garden Warbler *Sylvia borin*, Whitethroat *S. communis*, Blackcap *S. atricapilla* and Sedge Warbler *Acrocephalus schoenobaenus*.

The most eventful night was 2-3 May 1984 when not only were 32 birds caught and ringed but many other species were glimpsed as they circled round and round above the factory lights. One species was identified by its call as an Egyptian Goose *Alopochen aegyptiacus* but other birds apparently equally large, could not be identified satisfactorily. It is hoped that the continuation of work at the Mufindi site will further clarify the little known movements of Afrotropical migrants across Africa.

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